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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

TAYLOR, NICHOLAS R

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 02/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/045,213	EYCHISON ET AL.	
	Examiner	Art Unit	
	Nicholas R. Taylor	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44-48 is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11, 13, 14 and 31-43 is/are rejected.
- 7) ☒ Claim(s) 9, 12 and 15-30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 May 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-48 have been presented for examination. Claims 1-8, 10, 11, 13, 14, and 31-43 are rejected. Claims 9, 12, and 15-30 are objected to, and claims 44-48 are allowed.

Response to Arguments

2. Applicant's arguments filed 11/28/2005 have been fully considered but they are deemed not persuasive.

3. In the remarks, applicant argued in substance that:

(A) Prior art of Van Der Meulen discloses only cataloging and does not disclose the claimed notification system.

As to point (A), the Examiner disagrees with Applicant's interpretation of Meulen's cataloging services. The amended limitations describe a content abstraction program that includes a "content change notification system that notifies client applications of changes in content and content related information." Meulen, in cited portion column 5, lines 35-51, describes a cataloging process that teaches notification of changes in content and content related information. The argument that Meulen's system contains a content abstraction interface is available in the final rejection mailed 8/22/2005.

Meulen's "change notification system" (as opposed to a simple catalog) is best described in the process depicted in Figure 5. Step 420 includes a comparison to existing catalog material to determine if a change has occurred. Corresponding steps 464 and 468 perform the catalog "update" and notify the system of the addition of new material, consequently Meulen's cataloging system performs the amended claim limitations.

4. The rejections under 35 USC § 103(a) as applied to claims 9, 12, and 15-30 are hereby withdrawn. The Examiner gained a better understanding of the Applicant's claimed subject matter in light of newly added claims 44-48 and considers the prior rejections erroneous using the current prior art. Additional explanation is given in the reasons for the indication of allowable subject matter below.

Allowable Subject Matter

5. Claims 9, 12, and 15-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 44-48 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter:

In interpreting the above listed claims, in light of the specification and the applicant's amendments filed 11/28/2005, the Examiner finds that the prior art does not

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teach all of the limitations of the specified claim(s) in combination with the other elements presented.

Specifically, the prior art of record fails to teach a device abstraction layer using a single protocol as a unified communication interface to communicate with a content program abstraction interface, *in combination with* a first and second proxy, each communicating with network devices with their own respective protocols. This limitation, in combination with the claimed content location system, notification system, and client application outlined in the independent and dependent claims, is patentably distinct from the prior art of record.

Drawings

7. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application to replace figures 1-9 because certain figures, such as 8(a)-(c), contain extremely dark image reproductions that are either currently illegible or will not reproduce clearly. Additionally, many figures contain illegible wording due to letter crowding or show visible corrections, such as item 406 of fig. 4a or the steps in figure 9.

Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-8, 10, 11, 13, 14, 31-37, and 39-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shteyn (US Patent 6,618,764) and Van Der Meulen (US Patent 6,563,769, hereinafter "Meulen").

10. As per claims 1, 11, and 31, Shteyn teaches a network architecture for a network of electronic devices comprising:

a device layer having a plurality of electronic devices interconnected using at least one network backbone, wherein the plurality of electronic devices each operate using a device native communication protocol; (Shteyn, column 13, lines 23-29, and figure 1) and

a device abstraction layer which can communicate with the plurality of devices regardless of the device native communication protocol used by any of the plurality of devices and which presents a unified communication interface to the content abstraction program interface (Shteyn, column 13, line 45 to column 14, line 8).

Shteyn fails to teach content accessible to the plurality of electronic devices;

a content abstraction program interface which includes a set of content services for controlling the content accessible to the plurality of interconnected electronic devices

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and a content change notification system which notifies client applications of changes in content and content related information; and

the content abstraction program interface communicating with the device layer through the unified communication interface of the device abstraction layer such that the content abstraction program interface abstracts low level device control functions of the plurality of devices into the set of content services which control the content accessible to the plurality of interconnected electronic devices.

Meulen teaches content accessible to multiple electronic devices (Meulen, column 2, line 61 to column 3, line 9) and a content abstraction program interface with includes a set of content services for controlling the content accessible to the plurality of interconnected electronic devices that communicates with the network to access the devices (Meulen, column 3, lines 10-25). Meulen further teaches a content change notification system that notifies client applications of changes in content and content related information (Meulen, column 5, lines 35-51, and figure 5, specifically steps 420, 464, and 468).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Shteyn and Meulen to provide the content abstraction program of Meulen in the system of Shteyn, because doing so would make an easily accessed collection of recordings available (Meulen, column 1, lines 57-60).

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11. As per claim 2, Shteyn-Meulen teaches the system further wherein the content abstraction program interface further includes client applications which implement the content services (Meulen, figures 1 and 3).

12. As per claim 3, Shteyn-Meulen teaches the system further wherein the client applications of the content abstraction program interface include a content location system for locating content accessible to the at least one electronic device (Meulen, column 4, line 62 to column 5, line 5, and figure 4, specifically the Cataloger).

13. As per claim 4, Shteyn-Meulen teaches the system further wherein the content change notification system tracks the changes in content and content related information (Meulen, column 4, line 62 to column 5, line 5, and figure 4, and column 5, lines 35-51, and the process of figure 5).

14. As per claim 5, Shteyn-Meulen teaches the system further wherein the client applications of the content abstraction program interface include a content engagement system which enables the engagement of content regardless of its location on the network (Meulen, column 4, line 63 to column 5, line 19, and figure 4, specifically the retriever).

15. As per claim 6, Shteyn-Meulen teaches the system further wherein the content location system and the content engagement application are registered client

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applications of the content change notification system (Meulen, column 4, line 62 to column 5, line 5, and figure 4, specifically the Cataloger and the Retriever as part of the Collection Manager).

16. As per claim 7, Shteyn-Meulen teaches the system further including a device abstraction layer which is interposed between the device layer and the content abstraction program interface, the device abstraction layer communicating with the at least one device of the device layer using device native communication protocols and communicating with the content abstraction program interface using a unified communication interface (Meulen, column 3, lines 10-25).

17. As per claim 8, Shteyn teaches a network architecture comprising:

a device layer including, at least one electronic device programmed to communicate using a device native communication protocol, at least one network backbone, each electronic device connected to one of the at least one network backbone; (Shteyn, column 13, lines 23-29, and figure 1)

a device abstraction layer connected to the device layer, the device abstraction layer enabling communication between the at least one device and the device abstraction layer using the device native communication protocol of the at least one electronic device, the device abstraction layer further enabling communication in a manner independent of device native communication protocols (Shteyn, column 13, line 45 to column 14, line 8).

Shteyn fails to teach enabling communication between the device abstraction layer and a content abstraction program interface, wherein the content abstraction program interface includes a content change notification system that notifies client applications of changes in content and content related information.

Meulen teaches content accessible to multiple electronic devices (Meulen, column 2, line 61 to column 3, line 9) and a content abstraction program interface with includes a set of content services for controlling the content accessible to the plurality of interconnected electronic devices that communicates with the network to access the devices (Meulen, column 3, lines 10-25). Meulen further teaches a content change notification system that notifies client applications of changes in content and content related information (Meulen, column 5, lines 35-51, and figure 5, specifically steps 420, 464, and 468).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Shteyn and Meulen to provide the content abstraction program of Meulen in the system of Shteyn, because doing so would make an easily accessed collection of recordings available (Meulen, column 1, lines 57-60).

18. As per claim 10, Shteyn-Meulen teaches the system further wherein the content abstraction program interface includes a set of content services for controlling the content accessible to the at least one electronic device, the content abstraction program interface communicates with the device abstraction layer through the unified communication interface of the device abstraction layer (Meulen, column 3, lines 10-25).

19. As per claim 13, Shteyn-Meulen teaches the system further wherein low level device control functions which are abstracted by the content abstraction program interface are exposed to permit access to the low level device control functions (Shteyn, column 5, lines 1-13).

20. As per claim 14, Shteyn-Meulen teaches the system further wherein the exposed low level device control functions include unique device features (Shteyn, column 5, lines 1-13).

21. As per claim 32, Shteyn-Meulen teaches the system further wherein the abstraction layer includes a content location system for finding the location of the content on the network (Meulen, column 4, line 62 to column 5, line 5, and figure 4, specifically the Cataloger).

22. As per claim 33, Shteyn-Meulen teaches the system further wherein the content location system includes:

a file manager which receives event information concerning content and content related information, (Meulen, figure 4, cataloger 350) the file manager creates and maintains the content file systems, a content repository having a plurality of content file systems; (Meulen, figure 4, catalog 300)

a virtual file system, wherein the file manager forwards information from the content repository to the virtual file system which creates and maintains a table of content which includes updated content and content related information,

a content reader, wherein the content reader reads the content and content related information from the virtual file system into a content identification table wherein each piece of content and content related information is associated with a unique content identifier and stored as a unique content entry in the content identification table, (Meulen, column 7, lines 23-51, and the complete process of figure 5)

a content database, wherein the content reader also reads each unique content entry in the content identification table into the content database, and (Meulen, figure 4, catalog 300)

a writer for writing selected unique content entries into cached pages which can be accessed by applications using the architecture (Meulen, figure 4, catalog 300, wherein the content entries are cached in the catalog).

23. As per claim 34, Shteyn-Meulen teaches the system further wherein the abstraction layer includes a content engagement system which enables the engagement of content regardless of its location on the network (Meulen, column 4, line 63 to column 5, line 19, and figure 4, specifically the retriever).

24. As per claim 35, Shteyn-Meulen teaches the system further wherein the content change notification system tracks the changes in content and content related

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information (Meulen, column 4, line 62 to column 5, line 5, and figure 4, and column 5, lines 35-51, and the process of figure 5).

25. As per claim 36, Shteyn-Meulen teaches the system further wherein the content change notification system includes,

a client register repository for registering client services and client applications and storing such registration information in a registration database, (Meulen, column 4, lines 26-37 and the entries of figure 3)

an event manager for receiving event information and communicating with the client register repository and using the registration information in the registration database to determine which registered client services and client applications are registered to receive the event information,

a content change notification poster, and

wherein the event manager communicates with the content change notification poster instructing the content change notification poster to post the event information to registered client services and client applications which have been determined by the event manager to be registered to receive the event information (Meulen, column 8, lines 8-33, specifically the retriever).

26. As per claim 37, Shteyn-Meulen teaches the system further wherein the abstraction layer includes a content engagement system which enables the

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engagement of content regardless of its location on the network (Meulen, column 4, line 63 to column 5, line 19, and figure 4, specifically the retriever).

27. As per claim 39, Meulen teaches a method for providing content services comprising:

presenting a list of applicable content services (Meulen, column 3, line 65 to column 4, line 8, and figure 2A) and the content abstraction program interface includes a content change notification system which notifies client applications of changes in content and content related information; (Meulen, column 5, lines 35-51, and figure 5, specifically steps 420, 464, and 468)

accessing a list of content services; selecting a content service; initiating a content service request; interpreting the content service request; (Meulen, column 7, lines 52-57)

determining which of the content services and which of the at least one device is appropriate to receive the interpreted request; communicating the interpreted request to the appropriate at least one device and to the appropriate content service; and executing the service request (Meulen, column 8, lines 8-34).

Meulen fails to teach abstracting lower level device functions in a network of at least one electronic device. Shteyn teaches abstracting device functionality regardless of native protocol (Shteyn, column 13, line 30 to column 14, line 8). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Meulen and Shteyn to provide the device abstraction of Shteyn in the system

of Meulen, because doing so would allow home networks of different architectures to be integrated with each other (Shteyn, column 13, lines 11-14).

28. As per claim 40, Shteyn-Meulen teaches the system further wherein (a) presenting a list of applicable content services includes:

locating content and content related information accessible to the network; and displaying the content and content related information in a manner which abstracts low level device functions and displays content services (Meulen, column 3, line 65 to column 4, line 8, and figure 2A, wherein the content names are displayed instead of the device or device functions).

29. As per claim 41, Shteyn-Meulen teaches the system further wherein (g) communicating the interpreted request includes communicating the request to the appropriate at least one device in a device native communication protocol associated with the appropriate at least one device (Shteyn, column 13, lines 49-64, via references).

30. As per claim 42, Shteyn-Meulen teaches the system further wherein (g) communicating the request to the appropriate at least one device in a device native communication protocol associated with the appropriate at least one device is facilitated through the use of communication proxies (Shteyn, column 13, lines 49-64, wherein the references act as proxies).

31. As per claim 43, Shteyn-Meulen teaches the system further wherein executing the service request (h) includes: engaging the appropriate at least one device in order to execute the service request; and presenting a user with appropriate device functions and content services as needed (Meulen, column 8, lines 8-34).

32. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shteyn (US Patent 6,618,764) and Van Der Meulen (US Patent 6,563,769, hereinafter "Meulen"), further in view of Kenner (US Patent 5,956,716).

33. As per claim 38, Shteyn-Meulen teaches the above, and also the system further wherein the content engagement system further includes

a control application interface;

an engagement manager having a parser, a scheduler, and an executor;

the parser receives and interprets instructions to engage content and distributes the instructions for further action; the scheduler determines the status of preset engagement instructions and provides instructions based on the preset engagement instructions; and the executor, in response to instructions from the scheduler and parser, communicates the instructions to the device layer such that the content is streamed from the source device to the sink device (Meulen, column 8, lines 8-34, wherein the retriever parses the request, schedules the media to be taken from the

content catalog, and executes the request by providing the media, all completed through a control application interface).

However, Shteyn-Meulen fails to teach:

an activity map; the engagement manager communicates with the activity map to determine the current engagement status of the content and the plurality of interconnected electronic devices; and

where selected source and sink devices are engaged.

Kenner teaches identifying and tracking activity based on current engagement status of multimedia content (Kenner, column 9, lines 55-67). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have combined Shteyn-Meulen and Kenner to provide the activity mapping of Kenner in the system of Shteyn-Meulen, because doing so would allow determining the highest usage content (Kenner, column 9, lines 58-60).

Conclusion

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas Taylor whose telephone number is (571) 272-3889. The examiner can normally be reached on Monday-Friday, 8:00am to 5:30pm, with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3718.

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Nicholas Taylor
Examiner
Art Unit 2141



RUPAL DHARIA
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